

AMENDMENTS TO THE SPECIFICATION

- 1.) Please replace paragraph 16 in the specification as filed with the paragraph below:

[0016] In one aspect, a method of forming a cladding for being disposed about the core of an elongate optical article can include the following steps: providing [[a]] an elongate glass article; adding glass to the article for forming a first part of the cladding so as to be disposed about the core when present, the added glass including discrete regions having a different index of refraction than the added glass; and adding glass without discrete regions to the elongate glass article for forming another part of the same cladding so as to be disposed about the core when present.

- 2.) Please replace paragraph 17 in the specification as filed with the paragraph below:

[0017] In an additional aspect of the invention, a method of forming a cladding for being disposed about the core of an optical article can include the following steps: providing an elongate glass article; adhering a layer of soot to the elongate glass article for forming a portion of the cladding so as to be disposed about the core when present; sintering the layer of soot so as to form a first sintered layer including bubbles; adhering a different layer of soot to the elongate glass article for forming a different portion of the cladding so as to be disposed about the core when present; sintering the different layer of soot so as to form a different sintered layer substantially free from bubbles; and disposing a second cladding about the cladding, where the second cladding has an index of refraction lower than that of the cladding.

- 3.) Please replace paragraph 19 in the specification as filed with the paragraph below:

[0019] In a further aspect of the invention, a method of forming a cladding for surrounding the core of an optical article can include the following steps: providing [[a]] an elongate glass article; adhering a layer of soot to the elongate glass article for forming a portion of the cladding so as to be disposed about the core when present; sintering said layer of soot so as to form a first sintered layer of the cladding; adhering a different layer of soot to the elongate glass article for forming a different portion of said cladding so as to be disposed about the core

when present; exposing only the different layer of soot to a selected material in the form of a gas or liquid for absorption by the different layer of soot; and sintering the different layer of soot so as to form a second sintered layer of said cladding.

4.) Please replace paragraph 20 in the specification as filed with the paragraph below:

[0020] In yet another aspect of the invention, a method of forming a cladding for being disposed about the core of an optical article can include the following steps: providing [[a]] an elongate glass article; adhering a layer of soot to the elongate glass article for forming a portion of the cladding so as to be disposed about the core when present; distributing particles having an index of refraction different than the index of refraction of the soot with the layer of soot; and sintering the soot layer.

5.) Please replace paragraph 41 in the specification as filed with the paragraph below:

[0041] With continuing reference to FIGURE 3, the core **32** typically includes active material, such as one or more rare-earth dopants, which can be selected from the Lanthanide group of elements in the periodic table, in a glass matrix, which can be a silica glass matrix. Other materials, such as Ge, P, Al, B, F, etc. can also be included in the core **32** or in one or more of the other layers, such as cladding layers **34** and **36**. As is known in the art, such materials are typically added as dopants for any one or more of a variety of reasons, such as, for example, to modify the refractive index of the core **32** or of one or more of the cladding layers, to improve the performance of the rare earth dopants in the core **32**, to render the core **32** or one or more of the cladding layers sufficiently photosensitive, or to improve the radiation hardness of the core **32** or one or more of the cladding layers. As noted above, when the pump radiation intersects the core **32**, the pump radiation is absorbed by the rare earth material, such as erbium, in the core **32** for amplifying or generating the laser light propagating in the core **32**.

6.) Please replace paragraph 51 in the specification as filed with the paragraph below:

[0051] When drawing the optical fiber **30** from a preform, a furnace, such as a high frequency induction furnace or a resistance furnace, can heat one end of the preform, and a spool

can pull the optical fiber from the heated end of the preform. The optical fiber is ~~typical~~ typically drawn from the preform using a draw tower. Typically mounted with the draw tower are the following: a diameter-measuring element for monitoring the diameter of the drawn optical fiber; a coating apparatus that includes a die through which the drawn optical fiber passes for applying a protective layer or other layer(s) to the drawn optical fiber; and an ultraviolet (uv) lamp for curing the coating material before the optical fiber is wound on the spool. The foregoing description of a drawing apparatus is exemplary and is provided for background; the drawing process is well understood by one of ordinary skill in the art, and the term "drawing", as used herein, refers to heating glass and forming a strand of fiber from the glass, regardless of the exact apparatus used to draw the fiber.

7.) Please replace paragraph 55 in the specification as filed with the paragraph below:

[0055] Sintering a portion of the frit **116** to form glass prior to exposing the frit **116** to the selected solution **234** reduces any exposure of the sintered portion of the frit **116** to the selected material. Alternatively or additionally, soot can be added to the frit **116** after a selected portion is exposed. It is thus possible to control in this manner the parts of the inner cladding **34** that include truncated regions **40**. For example, in one practice of the invention, the inner soot, or frit, region **116A** of FIGURE 6 can be first adhered and sintered prior to adhering the second soot region **116B** to the center portion **104**. Placing the frit in an oven is one technique for sintering the first soot region **116A**. The second frit region **116B** can be exposed and processed as described to create regions of the selected material of a different phase. Thus the inner soot region **116A** can contribute to an inner portion of the ~~of the~~ inner cladding **34** that includes substantially no truncated regions **40**, and the outer soot regions **116B** can contribute to a part, such as the band **54** of FIGURE 4, of the inner cladding **34** that includes truncated regions **40**. With reference to FIGURE 6, the inner frit **116A** can also include soot deposited to contribute to the core **32**.

8.) Please replace paragraph 58 in the specification as filed with the paragraph below:

[0058] As understood by one ~~[[or]]~~ of ordinary skill in the art, in some processes, such as MCVD, soot formation and sintering of the soot can take place in one operation. For example,

assume that the torch in FIGURE 7B moves in the direction gas flow **226** and starts at the left hand side of the tube **200** shown in FIGURE 7B. As the gas flows past the area heated by the torch **208**, soot is formed and adheres to the tube **200** in a zone to the right of the torch **208**. The torch **208** then passes over the portion of the tube **200** where the soot has been deposited. If the temperature of the torch **208** is hot enough, the soot is then sintered to form glass. However, according to the invention, it can be desirable that the soot not be sintered, such that the soot can be exposed to the selected material, such as the selected solution **234**. In this instance the temperature of the torch **208** can be reduced such that the soot is not sintered. The soot can later be appropriately sintered using the torch **208** or by otherwise heating the soot, such as by placing the tube **200** in an oven.